

Message

From: Becker, David J CIV USARMY CEHNC (USA) [Dave.J.Becker@usace.army.mil]
Sent: 5/26/2020 7:52:41 PM
To: Ohl, Matthew [ohl.matthew@epa.gov]; Mark Nichter [Mark.W.Nichter@usace.army.mil]; Douglas Buchanan [Douglas.M.Buchanan@usace.army.mil]
CC: Krueger, Thomas [krueger.thomas@epa.gov]; Splichal, David E CIV USARMY CEHNC (USA) [David.E.Splichal@usace.army.mil]
Subject: Re: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Ex. 5 Attorney Client (AC)

From: Becker, David J CIV USARMY CEHNC (USA) <Dave.J.Becker@usace.army.mil>
Sent: Tuesday, May 26, 2020 12:44 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>; Nichter, Mark W CIV USARMY CELRL (USA) <Mark.W.Nichter@usace.army.mil>; BUCHANAN, DOUGLAS M <Douglas.M.Buchanan@usace.army.mil>
Cc: Krueger, Thomas <krueger.thomas@epa.gov>
Subject: Re: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Ex. 5 Attorney Client (AC)

From: Ohl, Matthew <ohl.matthew@epa.gov>
Sent: Tuesday, May 26, 2020 10:11:01 AM
To: Nichter, Mark W CIV USARMY CELRL (USA) <Mark.W.Nichter@usace.army.mil>; BUCHANAN, DOUGLAS M <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (USA) <Dave.J.Becker@usace.army.mil>
Cc: Krueger, Thomas <krueger.thomas@epa.gov>
Subject: [Non-DoD Source] RE: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Ex. 5 Attorney Client (AC)

Matt

Matthew J. Ohl
Remedial Project Manager
United States Environmental Protection Agency
77 West Jackson Boulevard, SR-6J
Chicago, IL 60604-3590

phone: 312.886.4442
fax: 312.692.2447
e-mail: ohl.matthew@epa.gov

From: Suzanne OHara <SOHara@Geosyntec.com>

Sent: Friday, May 22, 2020 1:16 PM

To: Ohl, Matthew <ohl.matthew@epa.gov>

Cc: pracher@psrb.com; Douglas Petroff <DPetroff@idem.in.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>; Douglas Buchanan <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (US) <Dave.J.Becker@usace.army.mil>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>; Mark Harkness <Mark.Harkness@ramboll.com>; Norman Bernstein <nwbernstein@nwblc.com>

Subject: RE: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Matt

You have requested a set of figures showing the distribution of compounds in groundwater at the Site that have boiling points above 100 °C. However, these compounds are no longer the pure chemical and are mixed with groundwater in the subsurface. The heterogeneous azeotrope is the temperature at which compounds mixed with water will begin to co-boil. As a result of Raoult's Law, the vapor pressures of the two components are additive, such that they co-boil at a temperature below the boiling points of each of the pure substances. Once the temperature has risen past the heterogeneous azeotrope, DNAPL can no longer exist as a separate phase. The attached table presents the heterogeneous azeotropes of the compounds detected in the groundwater at the Third Site. As can be seen from the table, azeotropes for VOCs at the site are all below 100 °C.

Based on the azeotrope analysis there are no compounds in the sheet pile enclosed DNAPL area with a co-boiling point above 100 °C.

Regards,
Suzanne

Suzanne O'Hara. MSc., P.Geo. (ON), P.G. (NY)
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From: Norman Bernstein <nwbernstein@nwblc.com>
Sent: Thursday, May 21, 2020 3:06 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: Suzanne OHara <SOHara@Geosyntec.com>; pracher@psrb.com; Douglas Petroff <DPetroff@idem.in.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>; Mary Desmond <mdesmond@nwblc.com>; Douglas Buchanan <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (US) <Dave.J.Becker@usace.army.mil>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>
Subject: Re: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Matt

Suzanne has not been available to respond to your email of yesterday. We will supply the information requested.

Norm

On Wed, May 20, 2020 at 8:53 AM Ohl, Matthew <ohl.matthew@epa.gov> wrote:

Suzanne:

Thank you for the sampling plan for phase 2. To assist in our review, please provide drawings showing the distribution of any constituents with a boiling point above 100 degrees Centigrade across the Third Site monitoring well network and within the DNAPL area.

Thank you,

Matt

Matthew J. Ohl
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From: Suzanne OHara <SOHara@Geosyntec.com>
Sent: Friday, May 15, 2020 4:29 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: nwbernstein@nwbllc.com; pracher@psrb.com; Douglas Petroff <DPetroff@idem.IN.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>; Mary Desmond <mdesmond@nwbllc.com>; Douglas Buchanan <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (US) <Dave.J.Becker@usace.army.mil>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>
Subject: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Matt

Please find attached the Phase II DNAP Area Supplemental Sampling Plan which presents the results of the groundwater sampling conducted in Phase I and the plan for Phase II with the proposed soil and deep groundwater sampling locations.

Please let us know if you have any questions or comments on the attached.

Regards,

Suzanne

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